

State of Self-Service 2010: Do-It-Yourself Libraries

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By Beth Dempsey

With consistently high marks from patrons and librarians, self-service options are changing the way libraries do business

When Michigan's Novi Public Library had its grand opening for a long-awaited new building in this bedroom community outside of Detroit, local news crews barely looked at the library's stunning views of a newly landscaped sculpture garden and park. They flashed past the building's wide open spaces, expansive materials collection, and inviting seating, landing instead smack-dab in front of a bank of self-checkout machines, where they cooed over the ability to serve yourself. Then, they turned the cameras to the library's drive-through window and marveled over the notion of returning books without getting out of the car.

Self-service is a hit. From gas stations to banks to grocery stores—it has become table stakes for retailers who aim to satisfy an increasingly independent consumer. Libraries are clearly no exception, and, in fact, with their card catalog past, they may well have been in the vanguard in enabling customers to find what they want on their own. Card catalogs were, obviously, just the beginning, and libraries have consistently innovated with services that allow their customers to take on tasks, streamlining their library experience. With this in mind, *LJ* launched a nationwide survey in April to set a benchmark on this movement.

The analysis below covers the 834 responses—all from public libraries—received out of 7,716 email requests sent, marking an 11 percent response rate. *LJ* explored a variety of circulation options, automated technologies, and online services—from the mundane to the sublime—in every region of the United States to get an accurate pulse-check on what's hot, what's not, and what's next.

Self-checkout and then some

Self-service options abound, including self-check machines, drive-through windows, vending machines with books and DVDs, as well as a host of Internet-driven tools that enable library users to register for library cards, or schedule themselves for classes and computer time. Fully 85 percent of libraries offer some sort of self-service, and that percentage goes up with the size of the population served. While the smallest libraries in the survey—those serving fewer than 10,000 people—were the least likely to have self-service, more than half offered some option.

The magic population figure hovers around 50,000, with nearly every library serving communities this size or larger offering self-serve options.

Further, it's the size of the population that directs the type of self-service for which libraries opt. The larger the library system, the more reliance there is on systems that can eliminate bottlenecks. Among the most popular are self-checkout systems that enable patrons to pick up their own holds during regular library hours, public computer scheduling, and Internet session management.

The smallest libraries share this interest in customer-management of computer and Internet sessions but have less need for systems that ease congestion. They tend to choose less expensive but sensible conveniences for their customers, such as printing from laptops.

Although still well entrenched, the venerable coin-operated copier is losing ground to pay-for-print systems. It's part of a larger movement for libraries to become cashless institutions. For example, automated online fine payments are used in an average of 20 percent of the libraries surveyed, and of those without it, 60 percent will implement the system in a year or less.

Virtual branches—with their 24/7 presence—are providing opportunities for customers to serve themselves in other ways, too. Online library card registration is available in ten percent of the smallest libraries and more than three-quarters of

the largest ones. Libraries consistently cite this self-serve function for opening the door to online databases when they're needed during nonlibrary hours. A frequent write-in option in the survey is online class and program registration that enables customers to sign up from home and gives librarians quick and accurate barometers of class popularity.

Libraries say, self-service works

When asked about the effectiveness of the self-service options they've implemented, librarians are overwhelmingly happy. Shifting tasks to users has enabled libraries to free up staff to take on other library responsibilities, according to more than 70 percent of responding institutions. Christine Lind Hage, director of Rochester Hills Public Library in Michigan, found enough efficiency in self-checkout to devote staff to solving a chronic backup from growing circulation. "It had gotten to the point that it was taking us three to four days to check in returned library materials," she says. The library revamped its circulation desk, upgraded its self-check equipment, and used the efficiency to deploy more staff to checkin. Materials are now back on the shelf within 24 hours of return.

She's not alone. Despite the very high price tag of self-check—reported to *LJ* as requiring an initial investment of \$20,000 for the smallest of libraries to \$1.2 million for the largest systems, plus thousands in annual maintenance—90 percent of libraries find these systems to be effective. In some cases, self-check has saved libraries from being overwhelmed by growing community demands. "Self-checkout allowed us to handle a 150 percent increase in circulation over two years that we wouldn't have had the space to handle otherwise," says Clara DiFelice, of California's Beaumont Library District. Buoyed by success, the library took advantage of a long weekend to remove its circulation desk and replace it entirely with an RFID self-check and self-return circulation system.

Less expensive innovations can deliver just as much impact—and maybe more. Both patron self-pickup of holds and self-directed printing (whether coin-operated or pay-for-print) are nearly 100 percent effective, respondents reported. Libraries with "Smart Cards"—user IDs that combine circulation, fee-based services, and Internet access in one—report a whopping 97 percent rate of effectiveness in easing congestion and creating efficiency for the customer and the library.

Self-scheduling of computer time receives accolades for its unique benefit of taking librarians out of the role of computer police. "We instituted automated computer booking this year, and it was something we were just almost forced to do because staff were spending all their time getting people on and off the public computers and refereeing disputes," says Jennifer McKell, director of Ohio's Chillicothe and Ross County Public Library. "The automated computer booking frees them up and pretty much takes away any opportunity for patrons to argue for just 'five more minutes' or 'I was next!'"

Also in the running for a near perfect effectiveness score is automated fine payment, which has multiple benefits: significant decreases in the number of customers with "stops" because of excessive fines, fewer errors from staff handling cash, and, perhaps most important in an age of budget cuts, increased revenue from customers' expanded opportunities to make payments. "eCommerce now averages \$750 per month and has increased overall revenues by that much per month as many people with fines prefer to pay online," says Vicky Hibbert, director of Iowa's Clive Public Library.

While there are clear gains to libraries in efficiency, customer convenience and the resulting kudos to the library are just as powerful. Dan Barr, director of the Murray Library in Utah, puts it this way: "Although not all self-services receive the same degree or percentage of use, all are considered successful by patrons and staff. One of our primary goals is convenience, and we view any self-service not as a staff efficiency measure but as a patron convenience option." Sometimes libraries realize just how much the convenience means to customers only when it's gone. McKell tells the story of a branch's neatly designed drive-through windows for materials returns and pickups. "We put it in a branch that was built about 14 years ago. That branch is currently closed for budget reasons (we hope temporarily), and one of the things we hear most from people...is that they want that drive-through window back," she says.

It's not always a bowl of cherries

Effective self-service isn't without headaches. Getting the public to accept change at a beloved institution, rife with memories, is the most common hurdle cited in the survey. Outreach, training, and patience are essential to establishing successful self-service innovations...and in the wake of budget and staff cuts, many libraries find it's all worth it. Rita Shacklett of the Linebaugh Public Library System, in Murfreesboro, TN, told *LJ* that the library's self-checkout stations aren't being used to their full potential because of several reasons, including staff and patron hesitation. Further, there simply aren't enough stations to build a commanding presence. Armed with that understanding, the library is moving ahead with automation, implementing RFID self-check stations exclusively at the circulation desk. An attending library clerk will be at the ready to help with any problems. The library will phase the system in over the course of months to ensure that not only customers adjust but staff, too.

The connection between staff and customers can be powerful. Nearly 30 percent of respondents bemoaned the reduction in face-to-face contact that can accompany self-service innovations, particularly self-checkout. Self-checkout is a significant investment for the Clive Public Library, which serves a population under 25,000. While Hibbert stops short of calling self-checkout a “dud,” its fit in the library is questionable. “Most of our citizens prefer to interact with staff, and we are committed to keeping staff at the public service desk as a high priority.”

On the other hand, Beaumont Library District’s DiFelice is using the lack of circulation staff to increase contact. She’s transformed circulation staff into “Information Concierges,” who meet and greet patrons as they enter. The concierge staff perform service triage, answering questions or directing customers to the reference desk. “[It has] proven very effective, a service level we could not have attempted without self-checkout,” she says.

Some problems are less easily solved. More than half the respondents cited technical difficulties as a hurdle to success. Though a lower percentage of respondents cited this as a problem, the anecdotes from librarians were more emotional and edged with deep frustration. Saddled with large investments, librarians tell of frequent equipment failures—RFID gates alarming improperly or not at all, on-again, off-again self-check machines that frustrate users, Smart Cards whose chips fall out—and some issues were exacerbated by slow response from vendors. Doubly troubling is the impact on the library’s image in the community—poor performance of technology provides an easy entrée for questions about how tax dollars are spent. Consistently, the stories shared were about new technology in use in libraries with limited internal IT resources.

A takeaway lesson from the survey is that libraries that can’t troubleshoot the innovation with their own staff should opt for self-serve options that employ mature, stable technology. Further, while vendors are generally quick to provide references when a purchase is being considered, a callout on an electronic list will likely elicit a broader response, enabling a look at the range of experiences before making an investment.

And, of course, there is that investment. Nearly 40 percent of libraries find the cost of self-service to be a negative. Innovation is a great thing, if you can afford it—or, if you’re lucky enough to have a tech tinkerer on staff. Consider the route taken by Eric Melton of Kirkendall Public Library (KPL), Ankey, IA. He built a self-check station from scratch using off-the-shelf parts (see bit.ly/cBvMt5). For about \$1500, Melton created a kiosk with a scanner and then coded a software connection to the library’s OPAC. After just a few weeks, the single kiosk was handling nearly 13 percent of circulation. Of course, as with any in-house solution, support and long-term viability become major considerations as libraries consider taking on projects like these.

Generally, libraries are navigating a variety of hurdles and headaches to advance the efficiency of their libraries. Director of Minnesota’s Lake Agassiz Regional Library Kathy Fredette’s mission to make self-check work throughout her system is a lesson in patience, flexibility, and vision. The library began the journey more than a decade ago with one—slightly clunky—unit in a single branch. Despite its unspectacular performance—nabbing only 30 percent of checkouts—self-checkout remained a library priority for its ability to deliver speed and privacy to patrons. The library invested in modular desk units that could be reconfigured as the library trialed new systems, new locations, and setups that were more conducive to self-checkout. After ten years of working at the right combination of setup and technology—along with a dose of new staff who didn’t remember how things “used to be”—self-check is now in six of 13 branches, capturing an average of 95 percent of outgoing items. “We’ll soon be installing it in two more branches. The public and staff both love it,” she says.

Services on the bubble

While barcoding continues to be the primary means of automating the tracking of materials (77 percent use it solely), RFID is gaining more traction than numbers might reveal. Currently, only five percent of respondents use it solely, and 15 percent use it in combination with barcoding.

However, as libraries get more adept at implementing technological innovations and reaping the benefits, they’re hungry for the next step. For example, libraries consistently cite a need to streamline checkin just as they’re doing with checkout, and RFID’s abilities in this area are piquing interest. There continue to be hurdles with security of media—particularly DVDs—and RFID tags can “bleed”—interrupting the other tags—but libraries appear to be more willing to work through these troubles. While there is still some hesitation among librarians burned by early, glitch-y RFID systems, general excitement about the potential of RFID is on the rise.

Book vending machines and off-site, automated libraries are among other services to watch. At present, a mere one

percent of libraries responding to *LJ*'s survey have adopted such technology, and while more than 80 percent reported they're effective, 14 percent feel they're not effective at all—the highest percentage earned by any self-service option. And considering the cost, starting at \$20,000 and running to a whopping \$120,000, they require careful thinking. (For more detail check out the chart at bit.ly/bfx4lm.)

Despite their cost, as library budgets are cut and branches are closed, these systems may prove to be valuable ways to keep library outreach—albeit impersonal—intact. Consider Portland Public Library's (PPL), ME, situation as the library is “right-sized” for the community, with closure of its five branches. Executive Director Steve Podgajny told *LJ*'s Norman Oder, “This is the moment we either lose physical spaces and contract or we lose physical spaces and expand.”

Among the library's strategies for expanding without physical spaces is self-service lending, with no staff, pointing directly at services such as automated e-branches and book vending machines.

Librarians also envision the use of book vending machines as taking the library to the customer, à la California's Contra Costa County Library's “Library A-Go-Go.” The library partnered with Bay Area Rapid Transit (BART) to place the machines in transit stations. Stocked with hundreds of popular fiction and nonfiction titles, the machines enable customers to make use of library resources at the point of need. The library helped customers take advantage of the new resource by keeping staff on hand at the stations for the first month of use.

Beyond books, new information kiosks are being developed that allow libraries to address underserved areas. 3M's new PIKiosk is designed to provide a public information service—answering questions about the community and the library—and connect populations with a library's online services, such as databases, OPAC, etc. (See sidebar below for a vendor's-eye-view of the self-service future.)

And what's next? There's no question that mobile applications will intersect with self-service. Libraries and vendors are already working together to create catalog and search interfaces optimized for smartphones. In the not-too-distant future, a user could walk in to the library with a bib record at the ready on a phone. An augmented reality overlay shows where the book is on the shelf via geolocation. Then, using a free app that hooks in to the ILS, the user scans the barcode with her camera, checking the book out to herself. Talk about self-service.... A scenario like this requires, maybe, a security guard and a clerk to shelve materials—a library outpost that could go anywhere.

Self-service is essential for the future

Self-service is rapidly evolving, marching forward with increasing success. And it seems that success breeds confidence in trying more. Fredette feels the long ordeal with self-checkout—which ultimately ended in a successful implementation—has inspired both her staff and customers to embrace other innovations. “Three to five years ago, it would have been unthinkable to believe staff or customers would support self-sign-up for computers, customers managing their own printing, and teleform and email notification of requests and overdue,” she says.

Libraries that avoid updating systems not only risk branding as Luddites but miss the opportunity to leverage efficiency into expanded service. Options for offloading work from staff and allowing customers to have greater control over their library experience have such an extraordinary range that there is something for every library to embrace. Start today by examining the backups, reviewing the places where staffers spend time, and learning from the experiences of other libraries. Be bold, envision success, but bring along some patience, just in case.

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SIDEBAR: A Rosy Future for Self-Service, Say Vendors

The self-service industry is thriving in the economic downturn. It is meeting increased acceptance by librarians and the public alike, and a new wave of innovations is close behind, according to an informal survey of some leading vendors. Whether the technology creates new points of service outside of the library-like a kiosk-or enhances what patrons can do within a traditional branch-like self-check or payments-vendors agree that their services help advance the library mission and aren't just a means to downsize staff.

Dipping public support may put new branches on hold-or worse-but technology can still help libraries extend their reach, says Fred Goodman, Public Information Kiosk's president. Goodman points to his company's e-branch

(distributed by 3M), part of the Roanoke Public Libraries, VA. Located in a mall, it provides an unstaffed information kiosk where patrons can place holds and even pick up materials. In one year, the e-branch generated 9000 reserves. "Its success is something a library could turn into political support for a conventional branch at a later time," Goodman says. Another product, the Lending Library (distributed by Brodart), located in a remote village on Colorado's Mt. Telluride, is a kiosk that offers the content patrons want most: new books, audio, and DVDs. An extension of the Wilkinson Public Library, the vending machine is housed in a grocery store and holds over 400 items, shipped up the mountain via gondola.

Part of the solution

It's cliché but true that while dollars are declining, usage is skyrocketing. "And self-check and fine payment can help libraries maintain their services and hours without compromising quality," says EnvisionWare's VP Mike Monk. "Increasingly, we're also seeing a demand for self-return." Self-return lets media-hungry patrons return their DVDs and immediately check out another batch-increasing access to content that has the most restrictions in number of items and loan period.

The most successful integrations, according to Monk, come from libraries that completely embrace self-service, like Las Vegas-Clark County Library District, NV, one of the most comprehensive self-service installations in North America. "With 99 percent self-serve, they are leveraging self-serve to the max," he says. "The staff are free to focus on program development and personal assistance. If staff members need to help a customer, they just use a workstation on the floor."

Integrated Technology Group president and CEO Shai Robkin sees self-service as transforming many libraries. "Lots of branches are seeing over 20 percent of their circulation coming through holds, all generated and checked out by the patron."

Meeting expectations

"Self-service is a megatrend right now," believes Scott Driessen, 3M's RFID portfolio manager. "Society is growing more comfortable with it every day, as people encounter it in government offices, banking, and retail." Most vendors believe that self-service is now a consumer expectation.

"We're seeing a bigger push for self-service than ever," says Lamar Jackson, Bibliotheca's president and CEO. Jackson reports that libraries are building self-service into their capital budgets and "are increasingly seeing it as just another long-term investment, like air conditioning." Gary Kirk, Tech Logic's executive director and VP, estimates that over 70 percent of the company's sorting technology goes into new buildings.

Jackson is also beginning to see RFID in K-12, where busy solo librarians can use the help in managing circulation.

A growing trend among library systems and consortia, according to Monk, is for continuous onsite service in the form of a vendor employee dedicated to that library's self-service needs-like troubleshooting and diagnostic work-freeing the technology staff to work on other enhancements.

Some libraries are also asking for new patrons to be able to register and validate themselves through a self-service application, says Monk. Others, says Robkin, charge for media loans or "to go to the head of the line for reserves. Payments as part of self-serve make these options possible."

As self-service matures, "the marketplace is asking for standards and interoperability between systems," says Kirk. Increased competition has been good for libraries, forcing improved functionality and increased user-friendliness, he adds. "The goal is always a system that supports self-service 100 percent." Ongoing research in RFID technology, Jackson predicts, will result in improved tags, especially for handling media.

What does the iPhone want?

But consumers today are integrating a range of other technologies into their lives. "We're convinced that companies like us have to deliver tools that allow the public to engage with libraries on their smartphone," says Monk. "Why shouldn't a student be able to release a print job from a phone?"

"We're closely watching mobile devices and the adoption of ebook readers to see how that can play out with self-service," says Driessen. And personalization, too, which offers unique experiences based on a customer's history. "With library concerns about privacy," he adds, "this would have to be an opt-in."

In many ways, RFID's potential is just being tapped. Robkin predicts that it will allow libraries Amazon-like services. "You should be able to place a book down on a table and by having its RFID tag read immediately get more information about that book, from reviews to recommendations for similar titles. After all, it's all in the database." - **Brian Kenney**